REMARKS

The Office Action dated October 11, 2006 has been received and carefully noted. The above amendments to claims 25, 32, 37, and 40 and the following remarks, are submitted as a full and complete response thereto.

In accordance with the foregoing, claims 25, 32, 37, and 40 have been amended to improve clarity of the features recited therein. No new matter is being presented, and approval and entry are respectfully requested. As will be discussed below, it is also requested that all of claims 23-42 be found allowable as reciting patentable subject matter.

Claims 23-42 stand rejected and pending and under consideration.

REJECTION UNDER 35 U.S.C. § 103:

At page 2 of the Office Action, claims 23-42 were rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 6,292,664 to Ostrup et al. ("Ostrup"). The Office Action took the position that although Ostrup does not disclose that the change in data rate is in response to an initiation of a call with a second network, it would have been obvious to one of ordinary skill in the art to incorporate this data rate change feature in the system of Ostrup to maximize the bandwidth allocation for data transmission. This rejection is traversed and reconsideration is requested.

Independent claim 23, upon which claims 24-29 are dependent, recites a network including a controller configured to communicate with a plurality of radiotelephones via

respective communication channels over a carrier. The channels operate at a first or second data rate such that the carrier transmits data through a single communication channel operating at the first data rate or two communication channels operating at the second data rate, and, in response to an initiation of a call with a second network, configured to initiate a change in a data rate of a transmitting channel from the first data rate to the second data rate.

Independent claim 30, upon which claims 31-36 are dependent, recites a controller configured to operate in a network, the controller including a responding unit configured to respond to an initiation of a call with a second network. The network communicates with a plurality of radiotelephones via respective communication channels over a carrier, the channels configured to operate at a first or second data rate such that the carrier transmits data through a single communication channel operating at the first data rate or two communication channels operating at the second data rate. An initiating unit is configured to initiate a change in a data rate of a transmitting channel from the first data rate to the second data rate.

Independent claim 37 recites a radiotelephone configured to operate with a network, the radiotelephone including a controller, in response to a signal from the network, configured to change a data rate of data being transmitted through a channel of the radiotelephone, wherein the network initiates a change in the data rate of the channel from a first data rate to a second data rate in response to an initiation of a call between the network and a second network.

Independent claim 38, upon which claims 39-41 are dependent, recites a method of communicating through a network with a plurality of radiotelephones via respective communication channels over a carrier including operating the channels at a first or second data rate such that the carrier transmits data through a single communication channel operating at the first data rate or two communication channels operating at the second data rate. The method also changes a data rate of a transmitting channel from the first data rate to the second data rate in response to an initiation of a call with a second network.

Independent claim 42 recites a controller configured to operate in a network, the controller including means for responding to an initiation of a call with a second network, wherein the network communicates with a plurality of radiotelephones via respective communication channels over a carrier, the channels configured to operate at a first or second data rate such that the carrier transmits data through a single communication channel operating at the first data rate or two communication channels operating at the second data rate. The controller also includes means for initiating a change in a data rate of a transmitting channel from the first data rate to the second data rate.

As will be discussed below, Ostrup fails to disclose or suggest the elements of any of the presently pending claims.

The present invention relates to a system in which there are two networks, for instance an internal network (wireless Intranet office (WIO)) and an external network (GSM), both capable of making internal and external calls. In accordance with one

embodiment of the present invention, the WIO network has a gatekeeper, which is capable of dynamically allocating channels to optimize capacity by allocating connections to full-rate or half-rate channels. The deterioration in speech quality caused by changing to a half-rate channel in a connection between two subscribers within the WIO network is lower than the deterioration resulting when one of the subscribers is in the GSM network. Therefore, in a situation where a channel is initiated with a second network, i.e., the GSM network, the gatekeeper will lower the data rate of an existing channel within the WIO network in order to allocate a full-rate channel to the connection with the GSM network. One of the many advantages of the embodiments of the present invention it to optimize the capacity of two networks while maximizing the quality of the connections.

Ostrup, in contrast, generally describes a method in which a connection is allocated a full-rate channel when occupied cell capacity is low and a half rate channel (if possible) when the occupied cell capacity reaches a predetermined threshold value. Each call initiated by a MS 120-180 is assigned a Full-Rate 240 channel by the MSC that is associated with the BS 110 to maximize voice quality until an occupied cell capacity 210 level equal to the HTTH value 230 is reached. Each subsequent request by a MS 120-180 is assigned a Half-Rate 250 channel to conserve available bandwidth. See column 4, lines 30-58. Clearly, Ostrup fails to teach or suggest, at least, "in response to an initiation of a call with a second network, configured to initiate a change in a data rate of a transmitting channel from the first data rate to the second data rate," as recited in

independent claim 23. Rather than changing the data rate of an existing channel in response to an initiation of a call with a second network, Ostrup changes the data rate for a new channel based on a predetermined cell capacity threshold.

In the Office Action it is acknowledged that the method disclosed by Ostrup does not explicitly involve changing the data rate of a connection responsive to an initiation of a call with a second network. However, it is erroneously contended in the Office Action that Ostrup describes using a half-rate channel if a call is to be established between the mobile station and a second network at column 7, lines 54 to 58, of Ostrup. The Office Action is considering a Public Switched Telephone Network (PSTN) to be a second network.

However, according to Ostrup, as shown in FIG. 4, when the BS 110 receives from the MS 180 a request for a channel, the MSC that is associated with the BS 110 determines whether the current capacity is lower than the HTTH value. Specifically, the traffic rate capability of the MS 180 is analyzed and the MSC that is associated with the BS 110 analyzes the type of connection requested and the call case. From the analysis conducted, the MSC that is associated with the BS 110 determines an appropriate traffic channel option that is lower than a full-rate. See column 6, line 54, to column 8, line 9.

Ostrup does appear to disclose that the network to which a call is to be connected may be considered when determining which data rate to allocate to a connection. As shown in FIG. 4, different factors are illustrated that can be considered when allocating a data rate to a connection, and from the section referred to in the Office Action (column 7,

lines 54-58), which describes a connection with the PSTN as a connection that may suitably use a half-rate data rate. However, considering that a connection with the PSTN may suitably use a half-rate data channel, as described in Ostrup, is not the same as "initiating a change in the data rate of a transmitting channel from a first data rate to a second data rate in response to an initiation of a call with a second network," as recited in claim 23. The network according to embodiments of the invention is different from what is disclosed in Ostrup because the controller is arranged to change the data rate of an **existing** data channel in response to a request for a new data channel with a second network. In Ostrup, the network with which a channel is to be established is a factor that may be considered when deciding a suitable data rate **for a new channel**. Clearly, Ostrup indicates that the for step 470 described in the referred portion of the Office Action is executed **when the BS 110 receives from the MS 180 a request for a channel**. See column 7, lines 23-26. Therefore, Ostrup does not teach or suggest the recitations of independent claim 23 in which the controller is configured to, in response to an initiation of a call with a second network, initiate a change in the data rate of a **transmitting** channel from the first data rate to the second data rate.

Furthermore, some of the many differences between the present invention and Ostrup is apparent as described on page 12 of the Specification of the present application, which provides how the deterioration in speech quality caused by changing to a half-rate channel in a connection between two subscribers within a WIO network is lower than the deterioration resulting when one of the subscribers is in a GSM network. For this reason,

the gatekeeper lowers the data rate of an existing channel within the WIO network in order to allocate a full-rate channel to the new connection with the GSM network. Ostrup does not teach or suggest changing the data rate of one channel because it is better able to cope with a lower data rate than a newly requested channel. Furthermore, Ostrup does not even disclose that connections in different networks may suffer different levels of quality deterioration if the data rate of a data channel is changed. Therefore, a skilled person would not find it obvious from Ostrup to change the data rate of one channel responsive to a different channel being initiated with a particular network. Although Ostrup does disclose that the data rate of an existing channel may be changed, this is only if the cell has reached a predetermined HTTH capacity level (see, for instance, column 6, lines 42 to 48 of Ostrup) and not because a new channel has been initiated with a second network. Therefore, it is respectfully asserted that independent claim 23 is rendered inventive over Ostrup by the controller being configured to, in response to an initiation of a call with a second network, initiate a change in the data rate of a transmitting channel from the first data rate to the second data rate.

Even if it is argued in the Office Action that the skilled person would find it obvious to combine changing a data rate of an existing connection (as described in Ostrup) with selecting an appropriate data rate dependent on a network with which a connection is made (as described in Ostrup), the skilled person making such a combination would only arrive at a network in which the data rate of an existing connection is changed in dependence on a network with which **that** connection is made.

The skilled person would not find it obvious to change the data rate of an existing connection in dependence on the network with which a **different** connection is made (as recited in independent claim 23).

Because independent claims 30, 37, 38, and 42 includes similar claim features as those recited in independent claim 23, although of different scope, and because the Office Action refers to similar portions of the cited references to reject independent claims 30, 37, 38, and 42, the arguments presented above supporting the patentability of independent claim 23 are incorporated herein to support the patentability of independent claims 30, 37, 38, and 42.

In view of the foregoing, it is respectfully requested that independent claims 23, 30, 37, 38, and 42 and related dependent claims be allowed.

CONCLUSION:

In view of the above, Applicants respectfully submit that the claimed invention recites subject matter which is neither disclosed nor suggested in the cited prior art. Applicants further submit that the subject matter is more than sufficient to render the claimed invention unobvious to a person of skill in the art. Applicants therefore respectfully request that each of claims 23-42 be found allowable and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by

telephone, the Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

Alicia M. Choi
Registration No. 46,621

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Tysons Corner, Virginia 22182-2700
Telephone: 703-720-7800
Fax: 703-720-7802

AMC:jkm